Remarks

The Applicants have amended the Specification to correct minor grammatical errors. No new matter has been added. Entry into the Official File is respectfully requested.

The Applicants have amended independent Claims 1 – 5 to clarify the structure concerning the baffle cylinders and associated slits. In particular, independent Claims 1 – 5 recite the presence of a baffle cylinder associated with an end portion of the cylindrical casing and having an internal surface with slits extending toward, but not to, a central axis extending along the cylindrical case, the cylinder being fitted in the potting layers. This structure is readily seen in the drawings.

The Applicants have also made minor amendments to Claims 7 and 8 so that they will be in strict accordance with the changes made to Claims 1 – 5. Entry of those changes into the Official File is also respectfully requested.

Before addressing the specific rejections, the Applicants have some introductory comments. The Applicants' hollow fiber membrane module is industrially excellent and can preferably be used in the field of dialysis in which mass production of the module is essential because it is possible to produce the cylindrical casing with the special baffle cylinders by ordinary injection molding and, in addition, the assembly of the module is easy.

By fitting the baffle cylinders having slits extending in a "skewed" direction against the central axis extending along the cylindrical casing in the potting layers, even if the casing material is hard to be adhered, the potting layers are hard to peel off or fall out from the cylindrical casing. Also, by making the slits skewed as indicated above, it becomes possible to smoothly insert the hollow fiber bundle in the casing without sticking out from the slits. It thus becomes possible to feed the treating liquid introduced from the slits to the hollow fiber bundle uniformly. By making the width of the skewed slits appropriate, it is possible to make the flow of the treating liquid introduced from the slits uniform, to thereby improve the performance of the module as a device for material interchange.

The Applicants note the rejection of Claims 1 and 7 – 8 under 35 U.S.C. §102 over Husain. The Applicants respectfully submit that Husain fails to disclose, either explicitly or implicitly, every feature as recited in those claims.

The Applicants note with appreciation the Examiner's helpful comments in general and the reference to the structure in Fig. 10 in particular. However, that structure is quite different from the structure recited in Claims 1 and 7 – 8. Husain discloses that a hollow fiber bundle is separated by a collar 440 to thereby properly secure a path for treating liquid. However, that idea is quite different and its effect is also different. That is, a big difference is that the above-mentioned effect of peel and falling resistance cannot be achieved by the invention disclosed in Husain. Furthermore, in Husain, the hollow fiber bundle must be separated and it is impossible to assemble the module as easily as the Applicants can. If anything, it is presumed that Husain is a structure used in a relatively large hollow fiber membrane module.

Furthermore, in Husain, by separating the hollow fiber bundle, the treating liquid is fed to the space between the respective hollow fiber bundles. However, the Applicants feed the treating liquid circumferentially uniformly to each hollow fiber which constitutes the hollow fiber bundle. Therefore, the Applicants' structure is quite different from that of Husain.

Also, Husain discloses a module 410 that includes composite headers 414 on each end. Each composite header is constructed of a series of pie-shaped elements 411 that collectively hold individual bundles of membranes. The result is essentially a composite that has a hub/spoke structure that forms a series of collars 440 that impinge against the ends of module casing 430. That structure is sharply different from the structure shown in the Applicants' Drawings, such as in Fig. 3, for example. That structure includes a baffle cylinder 12 that is associated with an end portion of the cylindrical casing 3. The baffle cylinder 12 has an internal surface with slits extending toward, but not to, a central axis extending along the cylindrical casing 3. That structure assists in anchoring the potting compound at ends of the hollow fiber membrane bundles contained within the cylindrical casing.

As a consequence, the Applicants' claimed structure in Claims 1 and 7 – 8 does not form the hub and spoke-type structure depicted in Fig. 10 of Husain. In particular, the Applicants' slits do not extend toward the central axis, which essentially is the "hub" of the Husain structure. The Applicants therefore respectfully submit that Husain fails to disclose the claimed structure. Withdrawal of the rejection of Claims 1 and 7 – 8 based on Husain is accordingly respectfully requested.

The Applicants note the rejection of Claims 2 – 5 and 7 – 12 under 35 U.S.C. §103 over the hypothetical combination of Reitz with Husain. The Applicants respectfully submit that, even if one skilled in the art were to hypothetically combine Reitz with Husain, the resulting structure would still fail to teach or suggest the structure recited in Claims 2 – 5 and 7 – 12. Specifically, the resulting structure of the Reitz-Husain combination would still contain the hub/spoke structure of Husain. However, the Applicants' Claims 2 – 5 and 7 – 12 all recite a baffle cylinder associated with an end portion of the cylindrical casing and having an internal surface with slits extending forward, but not to, the central axis extending along the cylindrical casing. The Applicants accordingly respectfully submit that Claims 2 – 5 and 7 – 12 are not taught or suggested by the hypothetical combination. Withdrawal of the rejection is respectfully requested.

The Applicants note the rejection of Claim 6 under 35 U.S.C. §103 over the hypothetical combination of Yamamoto with Husain. The Applicants respectfully submit that hypothetically combining Yamamoto with Husain would still fail to teach or suggest the structure recited in Claim

6. Hypothetically combining Yamamoto with the Husain structure would still fail to teach or suggest the claimed baffle cylinder associated with an end portion of the cylindrical casing and having an internal surface with slits extending toward, but not to, the central axis extending along the cylindrical casing and fitted in the potting layers. Withdrawal of the rejection based on the combination of Yamamoto with Husain is respectfully requested.

The Applicants note the rejection of Claim 6 under 35 U.S.C. §103 over the hypothetical combination of Yamamoto with Reitz and Husain. The Applicants have already established the inapplicability of the primary, secondary and tertiary references above. The Applicants respectfully submit that hypothetically combining all three disclosures would still fail to teach or suggest the Applicants' claimed baffle cylinder associated with an end portion of the cylindrical casing and having an internal surface with slits extending toward, but not to, the central axis extending along the cylindrical casing and fitted in the potting layers. Withdrawal of the rejection based on the hypothetical combination of Yamamoto, Reitz and Husain is respectfully requested.

In light of the foregoing, the Applicants respectfully submit that the entire Application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,

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